



Traditional knowledge of agriculture in Bengali folk songs

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India is a rich repository of cultural heritage and diversity, with a significant portion consisting of traditional folk songs. West Bengal has no exception and has got a wide variety of folk songs in every district of the state. This research has been conducted to identify the folk song relevant to agriculture and farmer's livelihood by understanding the contents with respect to themes. Emphasis has been rendered to explore the agricultural messages implied in the folk songs and to delve into any possibility to employ the folk songs as a tool for transfer of agricultural technologies. The research has been conducted by creating a compendium of the Bengali folk songs related to agriculture with experts' assistance. These songs were analyzed by applying content analysis and represented in tabular forms depicting knowledge items with quantification. Since folk songs relevant to agriculture were considered, most of the songs belonged to the category of Karmasangeeet (work song), followed by Tusu, Bhadu, Mahipal, Mecheni and others. Some of the songs carry traditional agricultural knowledge on cropping sequence, intercultural operation, plant protection, planting times, etc. Folk songs, whose primary idea was born to express the inner state of mind and break the monotony, can also be used for transforming the tacit knowledge into explicit one. Agricultural Extension, as a discipline, can very well employ the traditional folk media to impregnate the remotest of Indian villages with new technologies keeping intact the entertainment component.

Keywords: Compendium, Content analysis, Explicit knowledge, Folk songs, Tacit knowledge

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A song is a very old form of literature in the skin of a lyrical poem which may be sung accompanied by some musical instrument. Songs are predominantly passed from one generation to others, orally. Songs involve a strong and complex connection between melody and lyrics, melody and lyrics are often coordinated for overall emotional meaning points of stress grouping expectancy and closure¹.

In 1954, the International Folk Music Council defined folk music as "the product of a musical tradition that has been evolved through the process of oral transmission. The factors that shape the tradition are: (1) continuity which links the present with the past; (2) variation which springs from the creative impulse of the individual or the group; and (3) selection by the community which determines the form or forms in which the music survives"². Folk music is the music by and for the common people. It is typically anonymous music that is an expression of the life of people in a community. Singing in folk life is the natural outcome of their daily life, its living and varieties of modes³.

A folk song is perceived to be a traditional song that is typical of a particular community, region or culture. India is blessed with an enriched history of folk song because of its prolific culture, social, religious and topographical diversity. "Folk song or any art, if it is to have life must be able to trace its origin to a fundamental need. Such needs must prompt expression among people even in their most primitive and uncultivated state. To this rule the art of music is no exception; Parry (2009) has pointed out that the universal law of evolution demands that we should be able to trace even the most elaborate compositions of Beethoven or Wagner back to some primitive germ⁴. This primitive, spontaneous music has been called 'Folk Song', a rather awkward translation of the German word 'Volkslied', but nevertheless a word which stands for a very definite fact in the realm of music. It has been said that if we did not know by experience of the existence of folksong, we should have to presuppose it theoretically to account for the art of music"⁵.

Folk songs form an integral part of folk culture, thus the rural population dominated largely by farming community identify themselves with this

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form of music. The folk songs are popular among the remotest of villages of this country predominated by a population with lower levels of formal education. The most inventive bearers of folk songs are most often found to be the keenest minded and best-informed people of the community, but also the poorest⁶. The folk map of Bengal, provided below (Fig. 1) is a proof that even the remotest districts have its own folk culture. Thus, these folk songs are primarily spread from one generation to another through word of mouth and most of these remain undocumented. For instance, the paragraph below belongs to a Karmasanget (work song), wherein the primary

essence is motivational. The farmer artist is observed motivating his fellow farmers to plough their land which would ultimately lead to a plentiful harvest enabling them to reduce their financial burden.

*“Airey oh bhai haal baitey jai,
Sonar bhuinye chaas diya sonar fosol folai.
Mather fosol sonar haasi, bajai re bhai premer bashi,
Fosol bine asol ghore aar je kichu nai.”*

Translation

*“Come brother, let us go to plough
Ploughing our golden land, let us cultivate golden crop,*

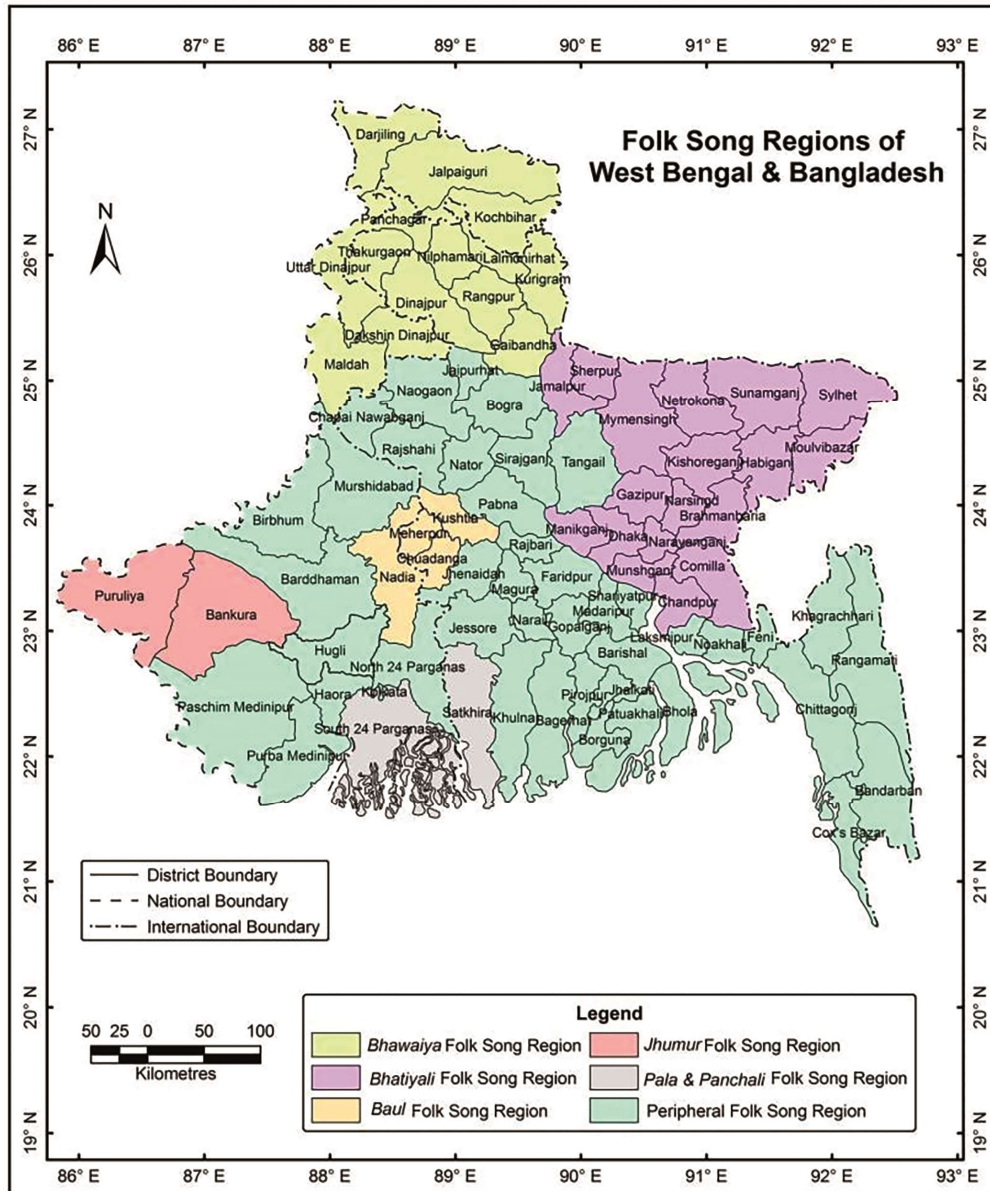


Fig. 1 — Folk Song Regions of Bengal¹⁴

Field crops will bring golden smile, let us blow the flute of love,

We have no resources excepting crops.”

Not only motivation, some of the Bengali folk songs also portray technical agricultural knowledge prevalent in those times. For example, the song mentioned below gives a vivid idea about the cropping sequence that was followed in those times but is still relevant to present time. According to the song, the farmer will follow *dhaan* (paddy) - *kolai* (black gram) – *nonka* (chilli) cropping sequence promoting three hundred percent cropping intensity on a parcel of land. The song also mentions fertilizer application before transplanting of paddy.

“Ashay thakinu ebare dhaan folibey bhellai

Dhaaner ropare kheter matit khawa diya

Tok ropinu jolot ghera sobta bhuinyer konot

Dhaan katiya mui kolai bunibo kohi toke aagey bhaagey

Kolairey tok puja dimo bhuinyer sogol dikot

Kolai uthile nonka bunibo

Nonka mor nokhyi dekhibe

Nokhyi ashiley mor betar biha lagamo bejoy dhum dham koriya”

Translation

“Hoping that this year we will have a bountiful harvest,

Will transplant paddy after providing nutrition to the soil

When it will be transplanted, the whole field will be filled with water,

After harvesting paddy, (I) will cultivate black gram,

Will worship black gram all around the field,

After harvesting black gram, (I) will cultivate chilli,

Chilli will bring great fortune

If I have enough fortune, my son will have a grand wedding”

Various Bengali folk songs mentioned the Bengali seasons and the operations carried out in those. One such song has been provided below; where most of the Bengali seasons are named along with the agricultural operations they are identified with. Ploughing was done in *Falgun* (February), seed was sown in *Choitro* (March), *Boisakh* (April) provided irrigation which resulted in grain filling in *Joishtho* (May). *Asharh* (June) witnessed the golden crop of Pre kharif rice, and *Shrabon* (July) witnessed harvest, whereas, *Bhadro* (August), *Aswin* (September),

Karthik (October) were the growing season of broadcasted Kharif rice which matured in *Oghran* (November) and the land remained fallow thereafter.

“Falgun mashey delam langol, choitro mashey beej,

Boishaakhet chikchihini, joishthey dhaaner seesh!

Asharh mashey sonar dhaan, sonar fosol foley.

Shraboney aus dhaan geroheste tey tuley!

Bhadro gelo Ashsin ailo, Karthik dei sara.

Oghranete kheter porey dekhbe aman chora!

Aman uthey ghorey ghorey dukkhyo kichui nai aar”

Translation

“Land preparation was done in Falgun month, seed was sown in Choitro,

Irrigation was made in Boishaakh, grain filling of prekharif rice was observed in Joishtho!

Asharh welcomed the golden crop stand.

The pre kharif paddy was harvested in Shrabon,

Bhadro passed, Ashsin came, Karthik knocks at the door,

In Oghran, the crop field will witness panicles of Aman/ kharif paddy

The advent of Aman paddy will allay every misery of the household.”

With the advent of modern civilization and technological breakthrough, people are gradually getting detached from their roots and these traditional folk songs are dying out. Commercial music, mostly Bollywood has replaced these folk songs thereby pushing them towards oblivion. It is the need of the hour to protect these ancient gems from extinction by documenting them and to recognize the traditional wisdom.

Excavation of the traditional knowledge and wisdom coded in these rustic literatures will open new avenues of cognition. It is high time to document the indigenous agriculture knowledge or wisdom prevalent in these texts lest they do not get eroded in the tides of time. In this context the present study has been conceptualized and carried out with Bengali folk songs.

Materials and Methods

A collection of Bengali folk songs, relevant to agriculture and farmer's livelihood was made with the help of experts (teachers of folklore and Bengali literature of different Universities of West Bengal) after obtaining their prior informed consent. Books, journals and compact discs were consulted according to their advice and through snowball sampling

method, a universe of seventy-seven folk songs were prepared with utmost effort. The major Bengali folk song regions were classified into six divisions⁷ (Fig. 1). All folk songs having relevancy and significance in agricultural knowledge systems irrespective of its geographical category were chosen and analyzed.

Data generation and analysis were done through Content Analysis^{8,9} (Berelson 1952) who defined content analysis as “a research technique for objective, systematic and quantitative description of the manifest content of communication”¹⁰. The unit or theme of content analysis were folk song categories, themes, types of crops, livestock, intercultural operations, agricultural implements, seasons, problems and messages. For thematic categorization, perception of the researchers and their expertise in agriculture was employed and for other cataloguing, technical knowledge along with appearance of particular words and phrases were taken into consideration. A trial run was made with few folk songs and a coding scheme with tally marks was evolved to determine the frequency.

The 77 (seventy-seven) different songs were read and heard very carefully to understand the meaning intended in the songs and occasionally experts in the field were consulted for further clarification. Based on the pre tested coding system, frequency of the particular category was generated and coded. For assessing reliability of coding, the principle of Test-Retest Method¹¹ was followed. Since, the whole process had been undertaken by the first researcher, it was important to judge the intra coder reliability with Cohen’s K¹² method which was found very high (0.87).

Inferences were finally drawn on the basis of frequency, percentage and ranks of different category of information obtained through content analysis. Researchers’ knowledge on agriculture and farmer’s livelihood were appropriately utilized while drawing the same.

Results and Discussion

The results of the content analysis were based on categorizations and number of parameters where category, frequency, percentage and rank were presented in a tabular manner. The distribution of Bengali folk songs collected has been represented by Table 1 where they are categorized into 6 groups namely, Karma Sangeet, Tusu, Bhadu, Sadhu, Mahipal and Mecheni. A category had been assigned

as ‘other folk songs’ which were difficult to group into the prescribed classes. From Table 1, it can be derived that most of the agricultural folk songs belonged to the category of Karma Sangeet with 31 of the total 77 songs constituting to 40.26% followed by Tusu- 18 (23.38%), Bhadu-12 (15.58%), Mahipal-7 (9.09%), Mecheni -2 (2.60%) and others-7 (9.09%).

The distribution of the collected folk songs according to the themes has been represented (Table 2). The major themes were namely, agriculture, devotion, livelihood, Government and politics. Since most of the folk songs were selected in the light of agriculture, this category contains nearly 74 songs constituting to 64.34%. Many songs were directed to God for showering his benevolence and are grouped under Devotion- 31 (26.96%). Some reflect the rural livelihood-6 (5.22%) and a few on Government and Politics-4 (3.48%). Though the universe contained 77 songs, here N=115 because some songs contained multiple themes. A song related to agriculture might as well reflect the rural livelihood and mention some features of the government policies. So, the summation after grouping all the songs with respect to their themes has resulted to 115 taking the overlapping themes into consideration.

A list of all the crops mentioned in the selected Bengali folk songs has been represented (Table 3). From the table, it is evident that paddy tops the list with a significant boundary of 62.67% alone since paddy has always been a major crop of the state of West Bengal. The list is followed by Jute -6 (8%), Pulses- 3 (4%) and other minor crops having meager

Table 1 — Distribution of Folk Song according to the Folk Song Category (N=77)

Serial No.	Category	Frequency	Percentage	Rank
1	Karma Sangeet	31	40.26	1
2	Tusu	18	23.38	2
3	Bhadu	12	15.58	3
4	Mahipal	7	9.09	4.5
5	Mecheni	2	2.60	6
6	Others	7	9.09	4.5
Total		77	100	

Table 2 — Distribution of Folk Songs according to the theme they depict (N=115)

Serial No.	Theme	Frequency	Percentage	Rank
1	Agriculture	74	64.34	1
2	Devotion	31	26.96	2
3	Livelihood	6	5.22	3
4	Government and Politics	4	3.48	4
Total		115	100	

share like mango, bettlevine, areca nut, chilli, banana, leafy vegetables all having a share of 2.67%. Some other crops include mustard, sesame, bitter gourd all constituting of 1.33% each. The list of agricultural operations mentioned in the Bengali Folk songs of this study has been represented (Table 4). Since the major crop here is paddy, so most of the operations are that of paddy starting from land preparation to storage and transportation. Only few songs have cited retting of Jute as an operation. The implements that find mention in the Bengali folk songs have been listed (Table 5). Since paddy has been a major crop, implements related to this crop gets frequently mentioned. For instance, husking pedal (traditional dhenki)-9 (40.91%), plough, winnowing fan-3 (13.64%) each, spade, sickle, scissors-2 (9.10%) each and ladder is mentioned just a single time (4.55%).

Table 3 — Distribution of Folk Songs according to the name of crops occurring in them (N=75)

Serial No.	Crop	Frequency	Percentage	Rank
1	Paddy	47	62.67	1
2	Jute	6	8.00	2
3	Pulses	3	4.00	4
4	Mango	2	2.67	7.5
5	Bettlevine	2	2.67	7.5
6	Arecanut	2	2.67	7.5
7	Chilli	2	2.67	7.5
8	Banana	2	2.67	7.5
9	Leafy vegetables	2	2.67	7.5
10	Mustard	1	1.33	12
11	Sesame	1	1.33	12
12	Bittergourd	1	1.33	12
13	Other horticultural crops	4	5.33	3
Total		75	100	

Table 4 — Distribution of folk Songs according to the agricultural operations mentioned(N=75)

Serial No.	Operations	Frequency	Percentage	Rank
1	Land preparation	8	10.67	5
2	Sowing	8	10.67	5
3	Manuring	4	5.33	8
4	Irrigation	8	10.67	5
5	Transplantation	3	4.00	10
6	Intercultural operation	3	4.00	10
7	Plant protection	2	2.67	12.5
8	Harvesting	10	13.33	1
9	Dehusking	9	12.00	2.5
10	Winnowing	1	1.33	14
11	Milling	5	6.67	7
12	Storing	2	2.67	12.5
13	Transporting	9	12.00	2.5
14	Retting (jute)	3	4.00	10
Total		75	100	

Table 6 gives an insight into the problems faced by the rural population, predominately farmers. The key problems mentioned here were drought and poverty which appeared in 5 songs each amounting to individual shares of 18.52%. The other problems were mostly discrimination-4 (14.81%), government policies and taxation resulting to 11.11% each, followed by flood, famine and habitat loss-2 (7.41%). Unemployment that time was probably not a severe problem with its mention in just a single song leading to 3.70%.

Table 7 signifies the distribution of Bengali Folk Songs according to the Bengali months mentioned in them. The Bengali Calendar comprises of 12 months

Table 5 — Distribution of Folk songs according to the implements mentioned (N=22)

Serial No.	Implements	Frequency	Percentage	Rank
1	Plough	3	13.64	2.5
2	Spade	2	9.10	5
3	Ladder	1	4.55	7
4	Sickle	2	9.10	5
5	Scissors	2	9.10	5
6	Husking pedal	9	40.91	1
7	Winnowing fan	3	13.64	2.5
Total		22	100	

Table 6 — Distribution of Folk Songs according to the Bengali seasons mentioned (N=36)

Serial No.	Bengali month	Frequency	Percentage	Rank
1	Boishakh	2	5.55	9
2	Joishtho	2	5.55	9
3	Ashaarh	3	8.33	5
4	Srabon	5	13.89	2
5	Bhadro	4	11.11	3
6	Ashsin	2	5.55	9
7	Kartik	2	5.55	9
8	Ogrohaeon	1	2.78	12
9	Poush	7	19.44	1
10	Magh	3	8.33	5
11	Falgun	3	8.33	5
12	Choitro	2	5.55	9
Total		36	100	

Table 7 — Distribution of folk songs according to the problems of rural population they depict (N=27)

Serial No.	Problems	Frequency	Percentage	Rank
1	Drought	5	18.52	1.5
2	Flood	2	7.41	7
3	Poverty	5	18.52	1.5
4	Discrimination	4	14.81	3
5	Government policies	3	11.11	4.5
6	Taxation	3	11.11	4.5
7	Habitat loss	2	7.41	7
8	Famine	2	7.41	7
9	Unemployment	1	3.70	9
Total		27	100	

Table 8 — Distribution of folk songs according to the livestock (N=22)

Serial No.	Livestock	Frequency	Percentage	Rank
1	Cow	9	40.91	1
2	Goat	5	22.73	2
3	Fish	4	18.18	3
4	Fowl	2	9.10	4.5
5	Buffalo	2	9.10	4.5
Total		22	100	

Table 9 — Distribution of folk songs according to the messages they depict (N=48)

Serial No.	Messages	Frequency	Percentage	Rank
1	Hope	13	27.08	1.5
2	Despair	13	27.08	1.5
3	Warning	6	12.5	3
4	Distress	5	10.42	5.5
5	Contentment	5	10.42	5.5
6	Motivational	4	8.33	4
7	Gratefulness to god	2	4.17	7
Total		48	100	

viz., Boishakh, Joishtho, Ashaarih, Srabon, Bhadro, Ashsin, Kartik, Ogrohaeon, Poush, Magh, Falgun, Choitro. Maximum songs have a mention of Poush in them-7 (19.44%), followed by Srabon-5 (13.89%), Bhadro-4 (11.11%), Ashaarih, Magh, Falgun-3 (8.33%) and Boishakh, Joishtho, Ashsin, Kartik, Choitro-2 (5.55%) each. The distribution of folk songs according to the animals and livestock has been represented in the Table 8. It can be noted that only 22 songs have the mention of animals and livestock in them with cow leading to-9 (40.91%) followed by goat-5 (22.73%), fish-4 (18.18%), fowl and buffalo-2 (9.10%) each.

The Bengali folk songs according to the messages carried by them have been distributed in the Table 9. It has been observed that there is an equal distribution of folk songs between hope and despair-13 (27.08%) each and also between Distress and contentment-5 (10.42%) each. Other messages include warning-6 (12.5%), motivational-4 (8.33%) and gratefulness to God-2 (4.17%).

Conclusion

India has been the land of culture and tradition and thus traditional knowledge was more important to the rural population than formal training or education. Folklore has been an integral component of rural culture and as long as folklore will exist, folk song will breathe. Folk media has strong bearings on the minds of rural population. The rural mass will be interested to learn technical knowledge through

folklore which they identify themselves with. Thus, the knowledge delivered by these folk songs would be welcomed as well as retained in the minds of the farmers for a very long time and might as well be transferred to their peer groups or even to the next generation. Every nook and cranny of this diversified country has its own folk culture and folk songs which, if wisely documented, preserved and utilized, will serve as a resource for technology transfer. Folk songs are sung in various situations, be it leisure or while working, even in social gatherings but mostly sung while in motion and is always welcomed by their audiences which results in transmission of agricultural knowledge through these songs. Realizing this great impact of folk songs in technology transfer, the Government of West Bengal took an initiative to promote watershed development in the state through Bengali folk songs (jhumur) specially composed for the purpose by local artists¹³. Thus, these traditional gems, not just in Bengal but in the whole Indian subcontinent, need imperative documentation. Furthermore, the artists responsible for keeping these beautiful melodies alive even in these rapidly changing times should be duly acknowledged as well as encouraged.

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Conflict of Interests

The authors declare that they do not have any conflict of interest.

Author Contributions

Conceptualization of idea was by DB. Data was collected by SA and SG. Formal analysis was done by SA. Supervision was done by DB. Roles/Writing - original draft was prepared by SA. Review & editing was done by SA, DB and SG.

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